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ABSTRACT

The technical and vocational education (TVE) system in Iran suffers from a lack of social status in comparison to academic education. Recent and future planning is directed toward changing the existing ratio of approximately 10:90 (TVE in comparison to academic) at the secondary level to 50:50 by the end of the second 5-year plan. The lack of trained TVE teachers is one of the most important obstacles that TVE is facing. Nonformal and formal TVE teacher training institutions and the Union of Universities of Technology's (UUT) Technical and Vocational Teacher Training School are acting to train TVE teachers. To implement and complete its second 5-year economic development plan, Iran must train 35,000 technicians and 120,000 trainees by 1999 in the TVE system. To achieve these goals, two major policymaking organizations have been formed: Higher Council for Educational Planning (HCEP) and Supreme Council for Technological Education (SCTE). Practical steps taken so far include the following: establishment of the UUT, which aims to provide common facilities and linkage between industry and educational institutions; incorporation of TVE in the second 5-year plan; an international seminar on technological education; and establishment of teacher training institutions. To ensure a successful path for the future development of TVE in Iran, the social status of the TVE system and its graduates must be raised. (YLB)

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CASE STUDIES ON TECHNICAL AND VOCATIONAL EDUCATION IN ASIA AND THE PACIFIC

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International Project on Technical and Vocational Education
Projet international pour l'enseignement technique et professionnel

CASE STUDIES ON TECHNICAL AND VOCATIONAL EDUCATION IN ASIA AND THE PACIFIC

The Development of Technical and Vocational Education for the Islamic Republic of Iran— A Case Study in Quality Improvement

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UNEVOC is the International Project on Technical and Vocational Education which was launched by UNESCO in August 1992. In the field of technical and vocational education, UNEVOC aims to foster the international exchange of ideas, experience and studies on policy issues; strengthen national research and development capabilities; facilitiate access to data bases and documentation; promote innovations in staff development; and support international cooperative actions.

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KEY FACTS

ISLAMIC REPUBLIC OF IRAN

Iran with an area of 1,648,000 square kilometres, is located in the Middle East. The climatic variety in Iran ranges from sub-tropical near the Caspian Sea region in the north to arid desert climates in the central and southern regions, and cold in mountain regions.

The population of Iran is around 60 million people with an annual population growth rate of approx 1.8 per cent. The people of Iran consist of the following major ethnic groups: Persians, Turks Kurds, Arabs, and Baluchis. Tehran with a population of over 11 million is the capital city of Iran.

The official language of Iran is Farsi (Persian) with Azari Turkish, Gilaki, Lori, Kurdish, Arabic, and Baluchi being other major languages spoken in Iran. Ninety-eight per cent of the Iranian population are Muslims.

The Islamic Republic of Iran is a republic based on the ideals of the Islamic revolution of 1979. The head of the government is currently President Hashemi Rafsanjani, with the Supreme Leader being Ayatollah Khamenei.

Social welfare is handled by the government Social Welfare Organisation, a powerful branch of the government, and also by several large semi-independent resourceful welfare foundations.

The Iranian economy is a mixed economy guided through five-year governmental plans. March 1994 to March 1999 is the current second five-year plan at which time GDP and income per capita average growth rates are projected at 7.9 per cent and 4.9 per cent annually, respectively.

Education in Iran consists of the normal 12 years through the secondary education, with the first five-years of elementary education being mandatory. Iran's higher education is well established, however TVE is only recently being rejuvenated. The literacy rate in Iran is 74 per cent.

Currently, 160 000 students at 556 locations with a staff of 18 000 are receiving formal TVE training. Another 116 000 of trainees participate in informal TVE courses offered by Ministry of labour. The number of Technical Training Centres are 1-5, staffed with 670 technical teachers

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EXECUTIVE SUMMARY

The TVE system in Iran suffers from a lack of social status compared to academic education. The present paper describes recent and future plans to change the existing ratio of approximately 10 : 90 (TVE versus academic, at the secondary stage to 50 : 50 by the end of second five-year plan).

In order to implement and successfully complete Iran's second five-year economic development plan, we ought to train 35 000 Technicians and have 120 000 Trainees in year 1999 in the TVE system. In order to achieve these goals two major policy making organisations have been formed:

- The Higher Council for Educational planning and its related committees, which are responsible for curriculum development
- The Supreme Council for Technological Education.

The practical steps taken so far are:

- The establishment of the Union of Universities of Technology (UUT). UUT aims to provide common facilities, as well as to provide linkage between industry and educational institutions.
- The incorporation of TVE in the second five-year National Education Development Plan (March 1994 to March 1999).
- An international Seminar on Technological Education, was held in Tehran in May 1994, for the purpose of information exchange and utilisation of other countries experience in the TVE field.
- The establishment of teachers training institutions will address the most important shortcoming of the TVE program in Iran which is in the area of teachers and instructors. These teachers should possess appropriate technological trainer qualifications, coupled with industrial experience.

To insure a successful path for the future development of TVE in Iran the following policies must be followed.

- The TVE system in Iran should be flexible enough to cope with changes in technology, industrial and economical advances and educational systems.
- The TVE system should be accorded equal status with the better known academic education. In other words, bring a measure of prestige to the TVE system.
- Provide possibilities for further education in the TVE system.

ABBREVIATIONS

HCEP = Higher Council for Educational Planning

SCTE = Supreme Council for Technological Education

TVE = Technical and Vocational Education

UUT = Union of Universities of Technology

All other organisation names or acronyms are defined or explained in the text.

1.0 ANALYSIS OF THE PRESENT SITUATION

1.1 GEOGRAPHY

Iran with an area of 1,648,000 square kilometre, is a vast region in South West Asia (Middle East).
Generally Iran has a dry climate. However, due to its size and the fact that it spans between 25 and 40 degrees latitude, as well as the presence of great mountain ranges, a variety of climates can be found in Iran. The climatic variety in Iran ranges from sub-tropical near the Caspian Sea region in the north, to arid desert climates in the central and southern regions, and cold in mountain regions.

Tehran with a population of over 10 million is the capital city of Iran and some of the other major cities are: Mashad, Isfahan, Shiraz, Tabriz and Rasht.

1.2 PEOPLE

The population of Iran is around 60 million people with an annual population growth rate of approximately 1.8 per cent — one of the highest in the world. People of Iran consist of the following major ethnic groups: Persians, Turks, Kurds, Arabs and Baluchis.

The official language of Iran is Farsi (Persian), with Azari Turkish, Gilaki, Lori, Kurdish, Arabic, and Baluchi, being other major languages spoken in Iran.

Ninety-eight per cent of the Iranian population are Muslims, with the remaining 2 per cent being mostly Armenian Christians, Jews, and Zoroastrians.

1.3 ECONOMY

Iran is rich in natural resources. Currently, oil is the number one export commodity, with great export potentials for other minerals and agricultural products.

Agriculture is given special importance in national economic development plans. The main agricultural products are wheat, barley, rice, cotton, beets and cereals, with excess fruits and vegetables exported.

At present the most important industrial units of Iran are steel, oil and petrochemicals, clothing, foodstuffs, auto industry, glass and wood industries. Parallel to these industries, traditional handicraft industries and carpet production have particular value for both tourism and exports.

The sectoral break down of the Iranian economy is depicted in Table 1 .

The Iranian economy is guided by five-year economic plans. March 1994 to March 1999 is he five-year plan at which time GDP and income per capita average growth rates are projected at 7.9 per cent and 4.9 per cent annually, respectively.

The currency of the Islamic Republic of Iran is the Rial.

	Per cent of Sector Total
Agriculture	23.0
Industries	17.2
Mining	0.6
Oil	8.2
Services, Construction & Utilities	51.0
Total GDP	100.0

Table 1 - Sectoral break down of the Iranian economy for the year 1372 (1993/94)

1.4 HUMAN RESOURCE DEVELOPMENT

Education in Iran has a long history dating back to the fifth century BC when Aramid alphabets were invented. After Iran joined the Islamic world in 650 AD, mosques also became the centres of education.

The first modern high school, Darl-al-Fonoon (technical school) was established in 1851. Iran's first modern university, The University of Tehran, was founded in 1934.

Currently, the government of the Islamic Republic of Iran provides its services to 16 million students (including pre-school). Children under six years of age account for 11.5 million, and annually 1.5 million is added to those eligible for elementary schools. In order to accommodate this growth in the student population the government has recently allowed private schools to be established.

In subsequent sections an overview of education in Iran with emphasis on Technical and Vocational Education will be covered.

1.4.1 EDUCATION

Primary and Secondary

The educational system of the Islamic Republic of Iran consists of a one year kindergarten (optional), five-year primary school, three-year guidance school, and four-year secondary school, as well as secondary vocational and technical education:

- Primary Education — is the first stage of formal education, which lasts five years and includes children between 6-10 years of age.

- The Guidance Cycle — This intermediate schooling takes three years for children from 11 to 13 years of age. In this cycle the students become familiar with sciences which enable them to find their area of interest and choose their field of speciality in secondary school.

- Secondary Education — This cycle consists of four year formal schooling for teenagers from 14 to 18 years of age. After having successfully passed the courses of the guidance cycle, pupils will continue their studies in one of two primary areas of theoretical (academic), or technical and vocational. In the case of the academic route secondary education is divided into two major fields of study, experimental sciences and humanities, which both lead to high school diplomas.

Currently, about 11 million students are engaged in study under the supervision of 488,000 teachers and educational staff in more than 70,000 schools at various levels of primary and secondary education in Iran.

University Education

Higher education in Iran has been established. for a long time. A variety of major fields of studies are available with most majors having bachelors, masters, and PhD degree programs. In the last academic year more than 344,000 students studied in 207 universities and institutes of higher education in Iran.

Higher education in Iran shows a student growth of 10.5 per cent per annum. Hence to offset this academic population growth, the Free University (Daneshgahe Azad) and Correspondence University (Daneshgahe Payame Noor) which are financially independent have been established in recent years.

1.4.2 TECHNICAL AND VOCATIONAL EDUCATION

Technical and Vocational Education (TVE) in Iran is divided into three levels, as follows:

1. Non-formal Technical and Vocational Training under the supervision of the Ministry of Labour. This program primarily trains individuals with minimal formal education (usually primary education) for vocational works such as barber training and welding.

   These training programs vary in duration and are usually short (few months).

2. Formal Technical and Vocational Education under the supervision of the Ministry of Education and also the Ministry of Culture and Higher Education. This education can be substituted for formal secondary education, after completion of the Guidance Cycle. The TVE programs proposed by TVE schools and colleges offer two year programs leading to a variety of majors needed in industry and commerce.

3. Formal Higher Technical and Vocational Education under the Ministry of Culture and Higher Education. These programs offer three years of study after the completion of degree programs in TVE schools and colleges leading to bachelor degrees in a variety of TVE fields.

The TVE education in Iran and its relation to formal (general education) are shown in Figure 1.

UNESCO and ILO frameworks for curricula development have been incorporated. It should also be emphasised that the five-year programming of TVE schools provides two major options:

- **General Technical** — Participants receive 5 years of training in the TVE fields, offered in schools supervised by Ministry of Education.

- **Specialised Technician** — Participants spend three years in TVE schools administered by the Ministry of Education and two years in TVE colleges specialising in fields such as power, roads and transport, industry, telecommunication, etc.

Currently 160,000 students at 556 locations with a staff of 18,000 are receiving formal TVE training. Another 116,000 trainees participate in informal TVE courses offered by the Ministry of Labour. The number of Technical Training Centres are 115, staffed with 670 technical teachers.

TVE policy making is performed by the following two groups:

- Higher Council for Educational Planning and its related committees, which are responsible for curriculum development and approval.

- Supreme Council for Technological Education, which is the sole governmental body responsible for policy making decisions related to both formal and non-formal technical and vocational education in Iran.

The Council members include the Minister of Education, the Minister of Culture and Higher Education, the Minister of Industries, the Minister of Agriculture, the Minister of Health, and the Director of Budget and Plan Organisation, among others presided by the First Deputy to the president of the Islamic Republic of Iran. Soon to be members will be the Minister of Labour and president of the Union of Universities of Technology (UUT).

1.4.3 TVE TEACHERS

The lack of proper Technical and Vocational teachers is one of the most important obstacles that TVE. is facing in Iran. Three sectors are acting to train TVE teachers which are outlined below.

(a) Non formal TVE teacher training institutions: These institutions are under the supervision of the Ministry of Labour and Social Welfare, the most important one being located in Karadj near Tehran.

(b) Formal TVE teacher training institutions, under the supervision of Ministries of Education, and Culture and Higher Education which are:

(i) Enghelab Eslami Institute of Technology (technical teachers institute)

(ii) Babol Teaching Faculty (technical teachers institute).

(c) UUT's Technical and Vocational Teacher Training School, Union of Universities of Technology (UUT) will be further covered in Chapter 3.0. The main objective of UUT's affiliated teacher training centre is to educate technical teachers for institutions active in industries agriculture, and commerce.

1.4.4 TECHNICAL AND VOCATIONAL EDUCATION POLICY MAKING

TVE policy making is performed by the following two groups:

Higher Council for Educational Planning and its related committees, which are responsible for curriculum development and approval.

Supreme Council for 'Technological Education, which is the sole governmental body responsible for policy making decisions related to both formal and non-formal technical and vocational education in Iran.

In addition to top TVE specialists, the Council members include: Minister of Education, Minister of Culture and Higher Education, Minister of Industries, Minister of Agriculture, Minister of Health, and Director of Budget and Plan Organisation, among others presided by the First Deputy to the President of the Islamic Republic of Iran. Soon to be members will be Minister of Labour and president of Union of Universities of Technology (UUT).

Technical & Vocational Education in Iran In Prospect with Formal Education

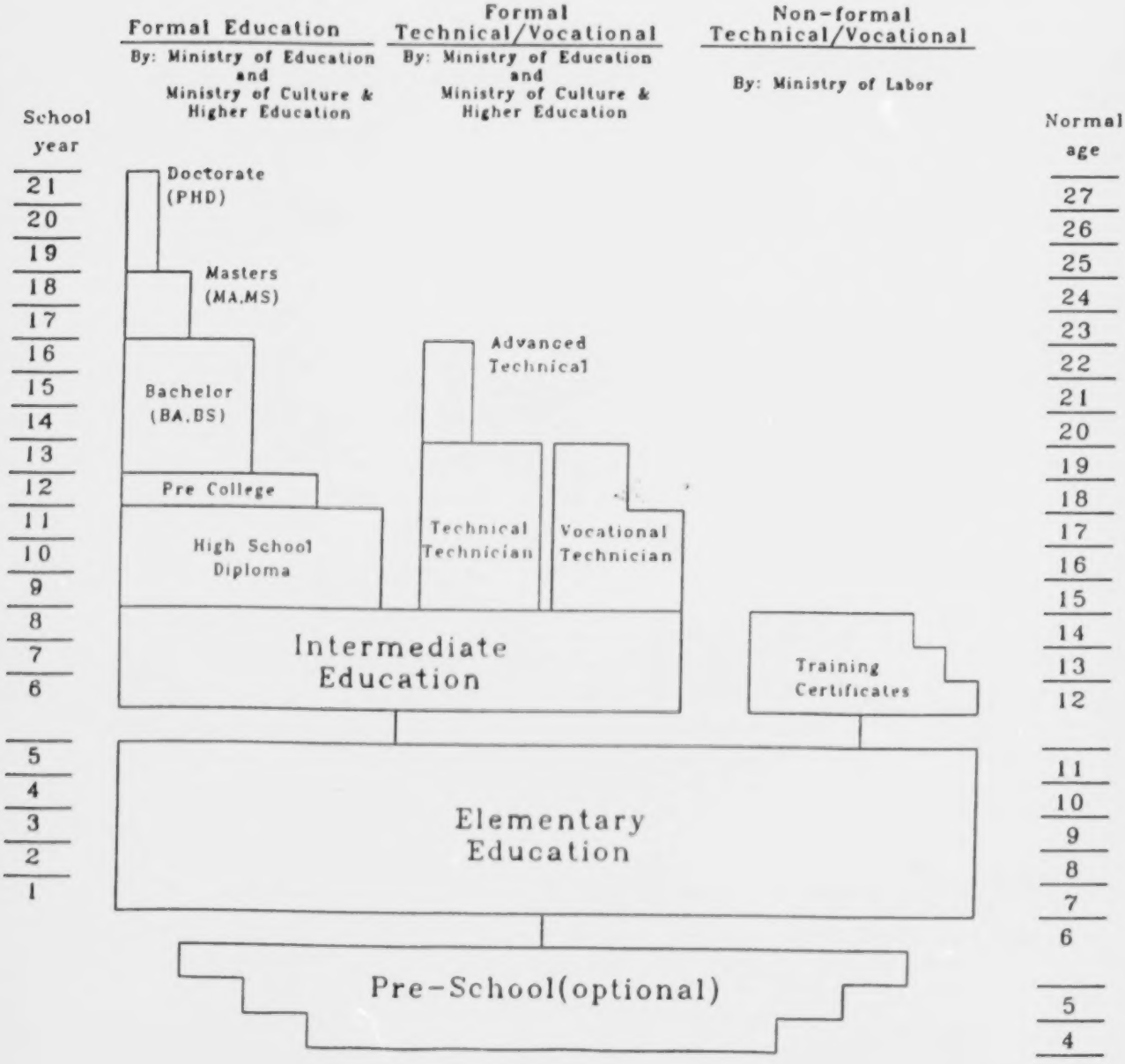
Formal Education
By: Ministry of Education and Ministry of Culture & Higher Education
Formal Technical/Vocational
By: Ministry of Education and Ministry of Culture & Higher Education
Non-formal Technical/Vocational
By: Ministry of Labor
School year
Normal age
Doctorate (PHD)
Masters (MA,MS)
Bachelor (BA,BS)
Pre College
High School Diploma
Advanced Technical
Technical Technician
Vocational Technician
Intermediate Education
Training Certificates
Elementary Education
Pre-School(optional)
21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4

Figure 1 - Technical and Vocational Training

2.0 TVE FUTURE SITUATION AND FORECAST

2.1 TVE FORECAST

Studies done related to TVE and its role in second five year National Economic Plan (Iranian year 1373 to 1377, corresponding to March 1994 to March 1999) show that by 1999 approximately 35,000 technicians will be needed in the country. These technical and vocational job openings will be in all of the different sectors of the economy (Figure 2).

A snapshot of the current TVE facilities and capacities in Iranian year 1372 (93/94) is as follows:

- Existing TVE short course centres under 115 centres the Ministry of Labour
- Current trainees in the facilities mentioned above are 151,000 trainees under the Ministry of Labour
- Twenty-two existing TVE two year program centres the Ministry of Education
- 33,000 current trainees in the facilities mentioned above under the Ministry of Education
- Thirty-five existing TVE programs under centres governmental ministries (e.g. Ministries of Agriculture, Industries, etc.)
- 8,000 current trainees in the facilities mentioned above under other governmental ministries

The total of all formal TVE trainees from all sources (excluding Ministry of Labour short-term programs) is reported at 45,000 trainees for the year 1372 (93/94).

The corresponding target of number of TVE trainees for the end of second five-year plan is projected at 120,000 trainees in the year 1377 (1998/99).

Table 2 and Figure 3 show the projected TVE enrolment in Iran's second five-year Economic Plan.

2.2 WAYS TO ACHIEVE DESIRED FUTURE SITUATION

The main problem in technical and vocational education in Iran was the fact that it had faced a dead-end. Until the recent developments mentioned in other sections of this report TVE education in Iran was not an integral part of a life-long education system and did not allow access to higher education. Furthermore, barriers between different types of education, employment and society has not been removed.

Under these circumstances the enrolment ratio of general education students compared to TVE schools was 90:10. Consequently, the country is facing a shortage of skilled manpower in areas of technology.

Strong national policies have been adopted to strengthen TVE in Iran and to promote its social status.

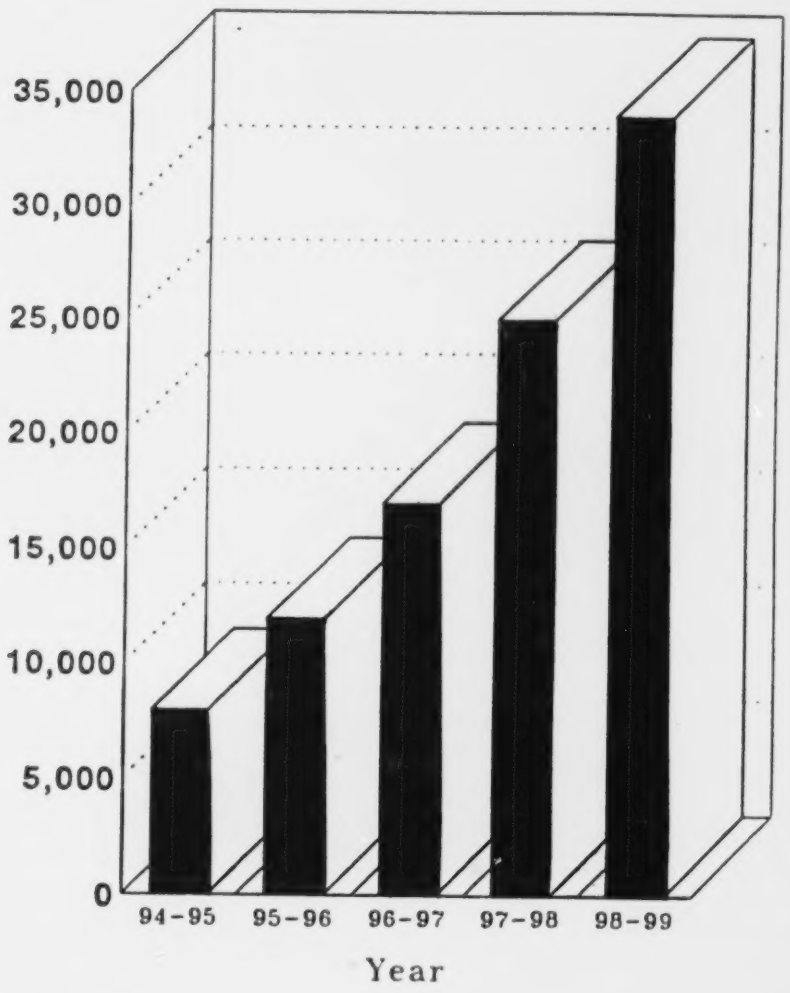

Figure 2
Projected Human Resource Needs in all Technical and Vocational Related Fields – Second Five-year Plan

Entering Students	Graduates	Enrolled Students	Year
13900	6434	45276	1372 (93–94)
20461	12077	67131	1374 (95–96)
28067	12077	67131	1374 (95–96)
33084	14384	83121	1371 (96–97)
39331	21152	101821	1376 (97–98)
47181	26457	120000	1377 (98–99)

Table 2 – TVE enrolment in Iran's second five year plan

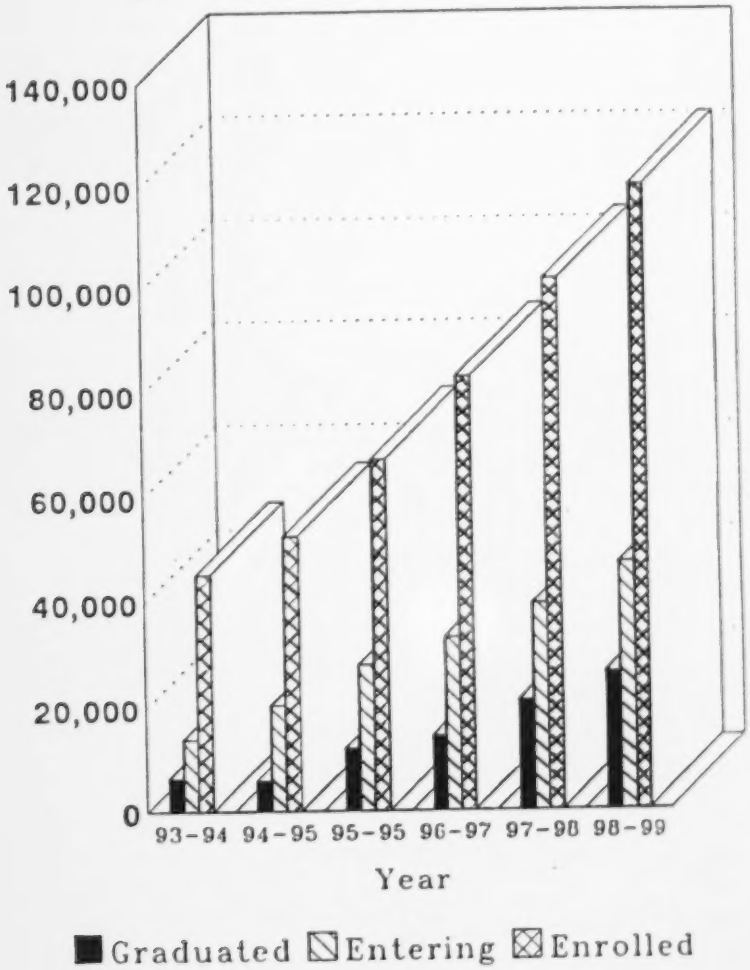

Figure 3
TVE Enrolment in Iran's Second Five-Year Plan

The Higher Council for Education Planning has passed a resolution creating a professional range of technical and vocational fields in parallel with the present academic range, providing opportunities for continuing education.

This innovation has already increased student interest and the ratio of enrolment in TVE fields has improved.

The Supreme Council for Technological Education, under the supervision of the President of the IR of Iran has taken several positive steps in strengthening and promoting TVE during its two years of existence. Some of these measures are outlined below:

- The establishment of the Union of Universities of Technology (UUT). The UUT is an educational and research organisation under the supervision of the Ministry of Culture and Higher Education. UUT aims to provide common facilities, as well as to provide the linkage between the industry and educational institutions to train and educate the required human resources in the TVE fields for the country.

- The incorporation of TVE in the second Five-Year National Economic Development Plan (March 1994 to March 1999), insuring budgetary and planning commitments.

- International Seminar on Technological Education to be held in Tehran in 1994, for the purpose of information exchange and utilisation of other countries experience in the TVE field.

- Establishment of Teachers Training School — the most important shortcoming of the TVE program in Iran is in the area of teachers and instructors. The Supreme Council has approved the establishment of this school under the supervision of UUT.

Some of the above topics will be further explained in the subsequent sections.

2.2.1 HIGHER COUNCIL FOR EDUCATIONAL PLANNING

The Higher Council for Education (HCEP) Planning has passed a regulation creating a professional line of technical and vocational fields in parallel with the present academic line with opportunities for continuing education.

This innovation has already increased student interest and the ratio of enrolment in TVE fields has improved.

The Technological Group of the Higher Council for Educational Planning is solely responsible for curriculum development of technical and vocational education. During its four years of existence this group has adopted and approved many curriculums for industry, agriculture and commerce.

The Technological Group consists of five sections listed below:

- Industry Section
- Agriculture Section
- Health care Section
- Art and Architecture Section
- Management and Services Section

The members of each of these sections consist of top administrators of their respective sectors.

For example in industrial Section the participating members consist of:

- Representatives from Ministry of Industries
- Representatives for Ministry of Power
- Representatives from Ministry of Road and Transportation
- Representatives from Ministry of Housing

- Representatives from Ministry of Petroleum
- Representatives from Ministry of Education

In addition to the above, each section has two university professors specialising in the field and one member who is expert in curriculum design.

All representatives from ministries mentioned above are deputy ministers, typically in charge of education/ training.

Similar combinations exist in Agriculture, Arts and Architecture and Management and Services sections mentioned above.

In all ministries that work with the Technological Group, there exists an educational committee responsible for their curriculum development.

These committees consist of delegations from relevant industries and one specialist from the TVE Department of Ministry of Education.

Therefore in all curricula which are developed in these committees the industry, agriculture and commerce have a strong contribution and this link guarantees the quality of the educational program which is developed by the Technology Group.

The work of this young organisation is based on cooperation with the industry, agriculture, and commerce, as a result, many corrections have been made in curriculums of previous TVE institutions to strengthen the technological line and technical and vocational education task.

2.2.2 SUPREME COUNCIL FOR TECHNOLOGICAL EDUCATION

The Supreme Council for Technological Education under the supervision of the President of the Islamic Republic of Iran has taken several positive steps in strengthening and promoting TVE during it's two years of existence. Some of these measures are outlined in Sections 3 and 4.

3.0 PROMOTING LINKAGE BETWEEN TVE AND INDUSTRIES

There are many industrial, agricultural, and commercial educational institutions functioning in the governmental organisations of Iran. These institutions are in addition to colleges and universities which are under the supervision of the Ministry of Culture and Education.

In order to promote close linkage between Technical and Vocational education institutions and industries, agriculture and commerce, the, establishment of a Union of Universities of Technology UUT was suggested by the author and is currently operational. The main objectives of the UUT proposal are to establish a technical and educational missioned organisation to recommended and prepare the means for total cooperation among the public and private institutions for training and educating the required human resources in industry, agriculture, and commerce.

The following items summarise the UUT's objectives:

- **Workshop and Laboratories**
  To provide and utilise common facilities existing in industry, agriculture, and commerce in technical and vocational fields for training the skilled manpower.

- **Curriculum**
  To develop and utilise standard TVE curricula in all institutions and colleges covered by the UUT. Curriculum planning is an integral part of general, technical and vocational education plans in the preparation of strategic plans.

  Modular curriculum development will also be utilised which this approach has been shown to be the most suitable for keeping pace with technological change.

- **Teachers**
  To utilise well qualified engineers and masters in industry as teachers and instructors for technological courses. There is a shortage both of suitably qualified teaching staff and teachers with relevant industrial or commercial experience. The teaching staff should possess appropriate technological and pedagogical qualifications coupled with industrial experience. This makes an ideal situation for UUT to utilise all of its qualified staff as teachers.

  The linkage between TVE colleges and industry and commerce is important in order to provide present and future technological teachers with practical experience in industry and commerce. Thereby ensuring that they acquire the appropriate knowledge and skills for their teachings. UUT links industry and education in helping to upgrade technical and vocational teachers. For example in agriculture, local co-operative projects involving personnel from nearby farms and staff from TVE involved in agro-industry is possible.
  There are large scale farms and agro-industry facilities related to the Ministry of Agriculture. Also there exist several natural resource facilities such as forestry and fishery under the supervision of Ministry of Rural Development (Jahad Sazandegee). The agro-industries, forestries and fisheries owned by these governmental organisations are ideal centres for teacher training on the technical fields of agriculture and natural resources. The following are some example projects;

  - Karadj Agricultural Institute
  - Mirza Kouchak Khan Fisheries College
  - Shahid Baakeri College (for animal husbandry)

- **International cooperation**
  The Union of Universities of Technology is an excellent means of providing regional training centres with the support of international organisations.

  International cooperation is vital for the exchange of information and teaching instruction such as tools based on Computer Aided Training (CAT) software and the improvement of trained teachers.

The pace of rapid technological change causes teaching and training equipment to become obsolete quickly. Local industries cannot donate new equipment to educational and training institutions to collaborate with teachers in course development. In this situation international assistance may be required and through UUT as the central point, cooperation will be much simpler than through individual institutions.

In the future, technological change will continue to be made first in industry and will reach educational institutions only after their initial development and marketing. As a consequence the teaching institutions will always be technologically behind industry.

UUT is one solution for this problem in order to minimise the divergence between technical and vocational provision and industrial practices.

4.0 STRATEGIES TO RAISE THE SOCIAL STATUS OF TVE SYSTEM AND ITS GRADUATES

4.1 HISTORICAL BACKGROUND

The first formal TVE institution was established in Iran in 1930. This college served as a means for educating skilled manpower in post high school training i.e. higher education in the technological line. This professional college was the recommendation of a German consultant as complementary to the Faculty of Engineering of the University of Tehran which is an academically oriented institution.

The activities of this TVE college were gradually terminated in 1965 due to the lack of social status of the TVE as compared with white collar institutions such as the Faculty of Engineering mentioned before.

All technological colleges such as the Tehran Polytechnics, which initially established afterwards to substitute for that TVE college, changed their objectives to serve the science of engineering since this type of education enjoyed a higher status and prestige. All other attempts to establish TVE colleges failed and this situation had an adverse impact on the lower and secondary TVE schools throughout the country.

4.2 SKILLED MANPOWER REQUIREMENTS

Industrial development has depended on foreign technicians during the past two decades in Iran.

It turned out that despite the fact that Iran's industry possessed moderate R & D teams and Iran had excellent engineering schools, the transfer of technology seemed impossible due to the shortage of technicians. Therefore the education of skilled manpower became the prime objective of our development plan. In addition to the above-mentioned requirements for industry, agriculture and commerce, the attraction of post secondary school graduates towards TVE institutions will relieve the general (academic) education system of the country from the pressures imposed upon it, therefore improving the quality of its graduates. This also indicates that raising the value of TVE education indirectly enhances the quality of academic education.

4.3 NEW DEVELOPMENTS AND PERSPECTIVES

Until a few years ago our educational system did not include any credible TVE system. Many systems of technical and vocational institutions had existed with scant prestige attached to them. The proportion of TVE versus academic enrolment (at the secondary stage) was 10:90. One of the main educational tasks in this new development of TVE in Iran is to change this ratio of 10:90 to 50:50. The TVE system should be accorded equal status with the better known (academic) education. Our first objective is to bring a measure of prestige to the TVE system of education.

According to the amendment (delivered by the Author) and approved in the spring of 1990 in the Higher Council for Educational Planning, parallel with the present academic system of education, a second TVE system of education has been created.

It is important to note that before this vital resolution the technical and vocational line of education in our country had reached a dead end with the post high school diploma as its terminal stage. The possibility of further education in this line of study blossomed, and enrolment in TVE school has demonstrated a notable increase in recent years. In the further education aspects, parallel with the "academic" system the newly created "TVE" system has now identified their awards with prevailing "academic" awards. Each award, the matriculation or the intermediate or the bachelors degree (which usually comes at the climax of the secondary level at the age of 19), may be outlined either after the present "academic" courses in arts or sciences, as now, or after technical, agricultural, or commercial courses from a polytechnic agricultural or commercial college .

This equivalence must of course, ensure the equal social recognition of those who have followed liberal and professional education.

In implementing this amended policy the Higher Council for Educational Planning has established a special division devoted to the development of curricula for technical and vocational education. This division has developed curriculum structures for industrial, agricultural and commercial education in relevant institutions and colleges.

Finally to maintain a strong political support for the novel system of professional education, the Supreme Council for Technological Education has been proposed and established under the supervision of the President. It was in this Supreme Council that the establishment of the Union Universities of Technologies (UUT) was suggested and approved.

The author believes that under the new development plans the prospects for technological education in Iran are promising. It is hoped that at the advent of the 21st century the technical and vocational education system will fulfil its determining role in the progress and development of the nation.